



MEMORANDUM

TO: Marisa Perales, Environmental Commission Vice-chair and Commissioners

FROM: Chuck Lesniak, Environmental Officer
Watershed Protection Department

DATE: April 27, 2016

SUBJECT: Proposed Amendment to Waterfront Overlay Regulations

On December 17th, 2015 the Austin City Council approved Resolution No. 20151217-057 (attached), initiating amendments to the Waterfront Overlay Festival Beach Subdistrict regulations (LDC 25-2-735). The resolution is related to a proposed redevelopment of the RBJ Senior Residential Center at 15 Waller Street to provide for rehabilitation of the existing senior center facilities and add other new housing and mixed uses at the site. The resolution also directed the City Manager to engage staff to “identify any strategies available, to the maximum extent feasible, to meet current code for impervious cover and water quality.” Council also directed the proposed ordinance to be “vetted” by the Environmental Commission and Planning Commission.

The RBJ property is located just east of IH-35 and north of and nearly adjacent to Edward Rendon Sr. Park at Festival Beach along Lady Bird Lake. The development to the north is primarily single family housing. Martin Middle School is to the east. The Waterfront Overlay regulations limit the site to 40% impervious cover. Water quality regulations are the same as those for an Urban watershed and other areas within the Desired Development Zone.

The potential developer had been contemplating impervious cover up to 78%. Since passage of the resolution staff have been working with the developer to identify options to reduce impervious cover and enhance water quality treatment to mitigate the impacts of the higher impervious cover. As a result of those discussions the current proposal by the developer include:

- Water quality ponds (bio-filtration and rain gardens) that meet the ½ inch plus sizing for 68% IC (65,000 CF)
- 30,000 SF of porous pavement (as shown in Exhibit__) for pedestrian areas
- 8126 CF of rainwater harvesting cisterns to capture 1.3 inches of runoff from 75,000 SF of Impervious surface (as shown in Exhibit__)
- Treatment of unspecified off-site drainage in the on-site water quality ponds (up to 6200 CF)

The ½ inch plus ponds to treat on-site runoff represent the minimum requirements to comply with current regulations. The additional water quality features represent a 35% increase in water quality volume. The porous pavement would be considered impervious for purposes of determining water quality treatment requirements and meeting impervious cover limits, however, this type of paving will reduce runoff volume and enhance on-site infiltration.

The Council resolution directed staff to find strategies to meet water quality treatment and impervious cover requirements in current code to the “maximum extent feasible” (MEF). In this case MEF is primarily related to two constraints; first, the area of the tract available for water quality controls, and, second, financial ability of the project to absorb the cost of reduced impervious cover and enhanced water quality treatment. The engineer for the developer has shown that the project can be designed to incorporate the water quality enhancements on site. With the current design, there is not room for very much additional treatment. Significant increases in treatment capacity would likely begin to reduce developable area.

The developer provided information estimating proceeds from sale of market rate land at 68% impervious cover to be \$12.3M and from 41% impervious cover to be \$4.0M, a difference of approximately \$8.3M. Their engineer estimates that the enhanced treatment would likely cost \$450,000-560,000 above the cost of complying with the City’s minimum requirements. The basis for the sales figures and cost estimates was not provided to the City.

Summary

Council directed staff to work with the developer to get impervious cover and water quality treatment as close to current code as possible. The developer is proposing an approximate 70% increase in impervious cover over the current 40% limit and is increasing water quality volume by roughly 35%. Because of the limited financial data provided, staff cannot fully evaluate whether the proposal for impervious cover and water quality treatment gets as close to code to the “maximum extent feasible”. However, based on the proposed design and representations by the developer that this level of impervious cover is necessary to make project financially viable, the proposal could be considered to be at the limits of feasibility.

RESOLUTION NO. 20151217-057

WHEREAS, the Austin Geriatrics Center, Inc., a 501(C)(3) nonprofit, more commonly known as the RBJ Senior Residential Center, was built in 1972 as an affordable housing development for seniors at 15 Waller Street, in East Austin; and

WHEREAS, Austin City Council Resolution 20100513-033 directed the City Manager to coordinate the City's participation in partnership with the RBJ Center Board of Directors and the community stakeholder group to evaluate the future use of the adjacent City property and the potential to participate in the development of a master plan for the 26.78 contiguous acres.

WHEREAS, the RBJ Center Strategic Master Plan Report, for the development of the property was completed on October 31, 2011, and includes the following priorities: continue to provide safe, affordable housing on-site; provide upgraded amenities; double the affordable housing for the elderly; add other affordable/mixed-income housing and mixed uses consistent with the neighborhood plan; and be good stewards of the land; and

WHEREAS, the RBJ site is located adjacent to City of Austin owned parkland; and

WHEREAS; the Water Front Overlay, particularly Land Development Code § 25-2-735 (*Festival Beach Subdistrict Regulations*), limits impervious cover at this site to 40 percent, which would prevent redevelopment of the RBJ site consistent with the goals of the master plan; **NOW, THEREFORE**,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

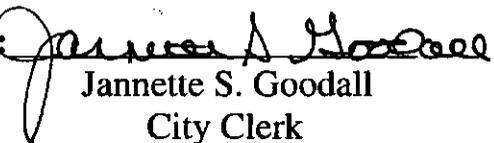
1. The City Council initiates amendments to the Waterfront Overlay, Land Development Code § 25-2-735 (*Festival Beach Subdistrict Regulations*), to increase allowable impervious cover from 40% to 78% for congregate living and related land uses within the Festival Beach Subdistrict, consistent with the goals and objectives described in this resolution.
2. The City Manager is directed to process an ordinance, as required by this resolution, and present it to the City Council for consideration following completion of the required public process.

BE IT FURTHER RESOLVED:

Prior to presenting this ordinance to the City Council for consideration, the City Manager is directed to engage the expertise of staff from the Watershed Protection and Planning and Zoning Departments to identify any strategies available, to the maximum extent feasible, to meet current code for impervious cover and water quality. The proposed ordinance shall be vetted by both the Environmental Board and Planning Commission prior to coming before Council for approval.

ADOPTED: December 17, , 2015

ATTEST:


Jannette S. Goodall
City Clerk



March 11, 2016

Mr. Chuck Lesniak
Mr. Mike Kelly
City of Austin
Watershed Protection Department
505 Barton Springs Road
Austin, Texas 78704

RE: Rebekah Baines Johnson Center Redevelopment Project
Water Quality Treatment – Approach and Methodology
21 Waller Street (±17.40-Acres)
Austin, Travis County, Texas

Dear Mr. Lesniak and Mr. Kelly:

Please accept this technical memorandum and accompanying preliminary engineering plan sheets as our explanation of one possible approach to water quality treatment and associated methodologies for the redevelopment of the Rebekah Baines Johnson Center (“RBJ Center”).

Based on prior conversations, we understand that your department desires water quality treatment for the project that exceeds what is currently required by code. We are considering certain measures as outlined in this letter that would accomplish a very high level of water quality and related stormwater treatments that would set a new standard for water quality treatment in all of the Waterfront Overlay districts and the entire City of Austin urban core. Please note that we are still considering whether such measures are financially feasible given the financing constraints of this development. We have included herein cost estimates for these measurements for further discussion and consideration by the team.

Background and Supporting Information. This memorandum has been prepared as part of a code amendment process spearheaded by the Austin City Council to allow an increase in the allowable impervious cover for the subject site. Current code allows 40% impervious cover in the Festival Beach district of the Waterfront Overlay; our development team is requesting an increase to 68% impervious cover.



The subject site is located at 21 Waller Street in the Full Purpose Jurisdiction of the City of Austin, Travis County, Texas. The owner of the property is the Austin Geriatric Center Inc., a non-profit corporation, which has been providing quality, affordable housing for seniors for over 40 years. According to the City of Austin zoning maps, this site is currently zoned Vertical Mixed-Use Commercial Services with a Conditional Overlay (CS-MU-CO-NP). The subject site is also located within the East Cesar Chavez Neighborhood Planning area and as such, new development on the site must comply with the regulations contained within the adopted neighborhood plan.

The site is located in the Town Lake Watershed, classified as an Urban Watershed, in the Desired Development Zone of the City of Austin. No portion of the subject site is located in a 100-year floodplain.

The Conditional Overlay associated with this site is the Waterfront Overlay Festival Beach; which states the following: “for an area not included in a primary setback area or a secondary setback area, the maximum impervious cover is 40%”. This is a very significant reduction from the base zoning allowance of 95% impervious cover on the subject site under the CS zoning. It is our understanding that the “the purpose of the waterfront overlay (WO) district is to promote the harmonious interaction and transition between urban development and the park land and shoreline of Town Lake and the Colorado River (LDC 25-2-175).” And specifically on the importance of impervious cover as a development regulation, the waterfront overlay task force report dated December 18, 2008 states: “Impervious cover limits allow for open space between structures to afford the opportunity for community access to the lakefront and scenic vistas for the community to the lake.” Put another way, we believe the waterfront overlay ordinance is a policy issue and not an environmental issue.

In its current form, the RBJ property is restricted to residents only. Our proposal opens up the entire 17.40 acres to the community and provides greater connectivity to Lady Bird Lake for existing RBJ residents as well as the larger neighborhood. Additionally, our proposed plan with 68% impervious cover is very reasonable given that the base zoning allows 95% impervious cover, even in similar waterfront overlay districts like Rainey Street, directly to the west of this site. Other considerations affecting the site layout include the preservation of more than three dozen heritage trees, full compliance with compatibility standards and Subchapter E design guidelines, and a long-running dialogue and cooperation with the affected neighborhood group.

Most importantly, however, our proposed plan includes approximately 500 units of affordable housing very close to downtown but in an established neighborhood already rich with



neighborhood character. This amount of affordable housing in this premium location at the deep levels of affordability we propose requires a significant commitment of private and public resources. Any additional environmental features that we include which are above and beyond code requirements will directly impact this project in one of two ways:

1. increasing the gap resources necessary to make the deal work, or
2. decreasing the affordability in terms of rents paid by the residents.

This project is fundamentally different than market rate housing, where rents can simply increase to accommodate for higher construction costs. Available sources of funding for the affordable housing piece are largely fixed and limited so any unnecessary costs brings significant risk to achieving meaningful affordable housing at this location.

Therefore, as we consider the following measures, it is very important that we keep in mind the cost of integrating these measures and the trade off of this extra cost in terms of reducing affordability at this location.

Water Quality Treatment Approach and Methodology. For water quality treatment, the City of Austin requires construction of water quality ponds (or approved alternative treatments) to treat the first 1/2-inch of stormwater discharge from the site plus an additional 1/10 of an inch for every 10 percent over the first 20 percent of impervious cover on the site (ECM 1.6.2.A). Using this methodology, and the accepted City of Austin Environmental Criteria Manual (ECM) appendix calculation sheets, the required water quality volume for the project, assuming 68% impervious cover is approximately 62,000-CF.

Required Water Quality Volume for 17.40-acres @ 68% impervious cover = 62,000-CF

The code allows existing impervious cover that is to remain and which is not subject to redevelopment to be omitted from the required water quality volume (ECM 1.9.2); examples of this on the subject site would be the existing RBJ tower which is to remain upon redevelopment, and several areas of existing asphalt parking and drive lanes. It is important to note that this proposal does not take advantage of any of those credit-granting provisions. Rather, our calculations assume a complete redevelopment of the site, with water quality treatment exceeding the 100% treatment requirement.

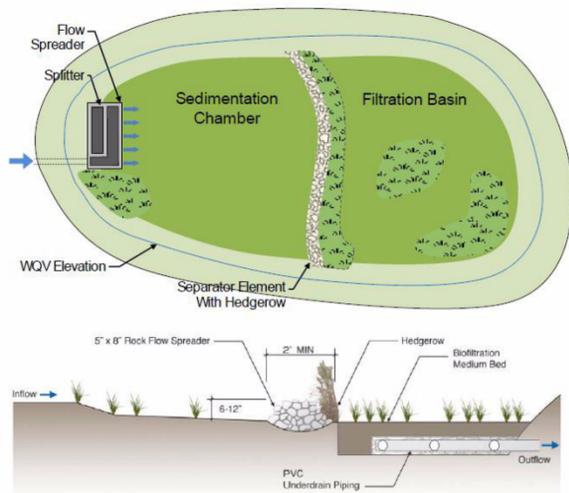
Therefore, we are considering designing the primary water quality treatment for the project to be through **Bio-Filtration Ponds** and **Rain Gardens**. In this approach, we would treat



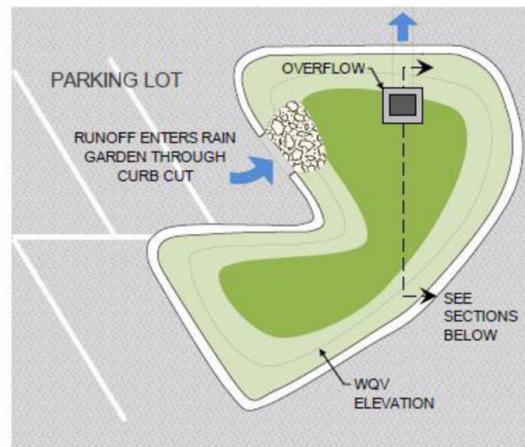
approximately 65,000-CF in what is termed “Green Stormwater Infrastructure” according to the ECM (ECM 1.6.7), of which bio-filtration ponds and rain gardens are included. Our proposal features two bio-filtration ponds and 3 rain gardens distributed across the site. At approximately 65,000-CF, this Green Infrastructure more than accommodates the 100% required water quality volume of 62,000-CF.

Provided Water Quality Volume in Green Infrastructure = 65,635-CF

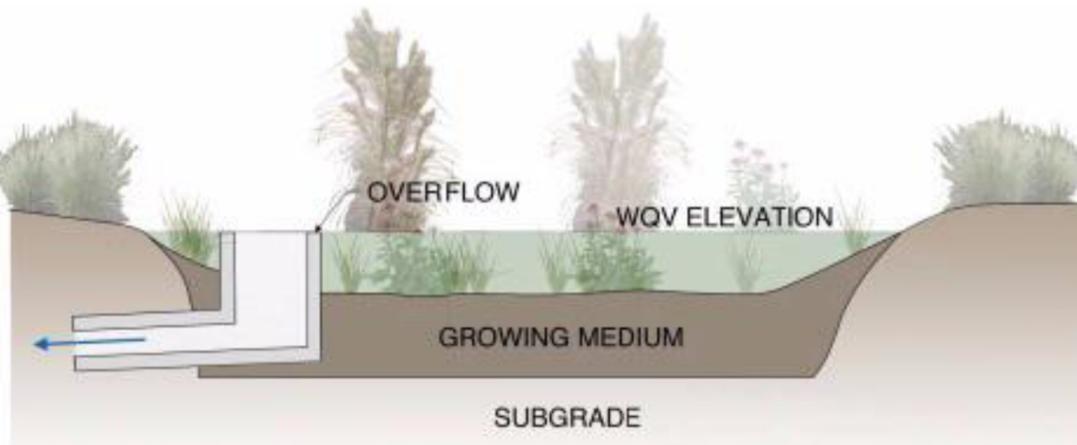
The images below appear in the ECM and graphically depict the two main treatment methodologies we’re proposing.



Sample Bio-Filtration Pond, from ECM



Sample Rain Garden, from ECM



Rain Garden Cross Section, from ECM



In order to demonstrate a level of treatment above and beyond the code requirements, we are also considering several additional water quality treatment measures to ensure that the project exceed the ECM mandated minimums, as outlined below.

1. **Porous Paving.** We are considering an additional $\pm 30,000$ -SF of pedestrian sidewalks and surface parking areas to be constructed out of porous paving or pervious pavers meeting ECM 1.6.7.E. This water quality treatment is in addition to the 65,000-CF provided in the Green Infrastructure facilities described previously. This porous paving or pervious pavers is also considered green infrastructure by the ECM. We would estimate that the cost delta of providing this benefit to the project to be approximately \$320,000 to \$380,000 based on recent pricing on similar projects.
2. **Rainwater Harvesting.** We are considering capturing approximately $\pm 75,000$ -SF of rooftop areas consisting of parking garage decks and elevated courtyards in a rainwater harvesting system as described in ECM 1.6.7.D. The water collected through this effort will be used for site landscaping irrigation. This water quality treatment is in addition to the 65,000-CF provided in the Green Infrastructure facilities described previously. While the rainwater harvesting will not meet some of the standards of the ECM such as the redundant storage volume requirement, this is considered green infrastructure by the ECM. We would estimate that the cost delta of providing this benefit to the project to be approximately \$90,000-\$120,000 based on recent pricing on similar projects.
3. **Treatment of off-site and upstream drainage areas.** In addition to the water quality treatments described above, we are also considering capturing and treating up to 10% of the total water quality volume (up to 6,200-CF) of upstream drainage area which is not currently being treated before its discharge to Lady Bird Lake. This capture area would be treated in the bio-filtration ponds and rain gardens previously described. We would estimate that the cost delta of providing this benefit to the project to be approximately \$40,000-\$60,000 based on engineering estimates.

The above measures represent increases to the project scope. We understand that these measures may be critical to the City's acceptance of our plan, but these also impact the proforma – and therefore the affordability of the project. We are willing to consider these measures, but the funding gap increases in corresponding fashion.

It should be noted that we considered green roofs as a potential treatment option, but we determined that green roofs are not economically feasible because the 4 foot depth would necessitate concrete and/or steel frame construction instead of wood frame construction. The



upcharge associated concrete frame over wood frame construction is approximately \$95 per net square foot or \$22,000,000 (per building). Here, we are proposing 2 large new construction buildings. In other words, this option cannot be supported on any level.

In conclusion, we are considering providing over 100% of the required water quality treatment in on-site infrastructure, an effort that is unprecedented in any waterfront overlay district or urban core project in the City of Austin. This would set the standard for future impervious cover increase requests that you may encounter in the years to come. A summary of treatment approaches is outlined in the table below.

Primary Water Quality Treatments				
Drainage Area	Facility Type	Quantity	Footprint (SF)	Volume (CF)
1	Bio Filtration Pond	1	8,385	29,347
2	Rain Garden	1	5,982	5,982
3	Rain Garden	1	5,502	5,502
4	Rain Garden	1	1,930	1,930
5	Bio Filtration Pond	1	11,437	22,874
			Total Provided	65,635
			Total Required	62,000

Secondary Water Quality Treatments			
Facility Type	Area Treated	% of Total Imp. Cover	Volume Treated (CF)
Porous Paving	30,000	5.83%	N/A
Rainwater Harvesting	75,000	14.57%	8126
Offsite Treatment	TBD	N/A	Up To 6200

We trust that you will find this technical memorandum acceptable for its intended purpose of explaining our possible approach and methodologies for water quality treatment on the redevelopment of the RBJ Center property at 68% impervious cover. Should you have any question, comments, or require further information, please do not hesitate to contact our office.

Sincerely,

BIG RED DOG Engineering | Consulting

Texas Engineering Firm No. F- 15964

Will Schnier, P.E.

Chief Executive Officer

Proposed Amendments to the Waterfront Overlay Regulations for RBJ Senior Center

Margaret Shaw, Economic Development Department

Chuck Lesniak, Watershed Protection Department



Background

- RBJ Senior Center is a 16 story residential facility located at 15 Waller Street
- Constructed between 1968 and 1972 led by Lyndon B. Johnson
- Variety of nearby land uses: parkland, Health Dept. building, small multi-family, and single family
- Property is within the Festival Beach subdistrict of the Waterfront Overlay, which limits impervious cover to 40%

RBJ Campus –
Northeast corner
IH35 and Lady
Bird Lake.
Austin Geriatric
Center owns 19
acres. The City of
Austin owns
almost 9 acres.



Background

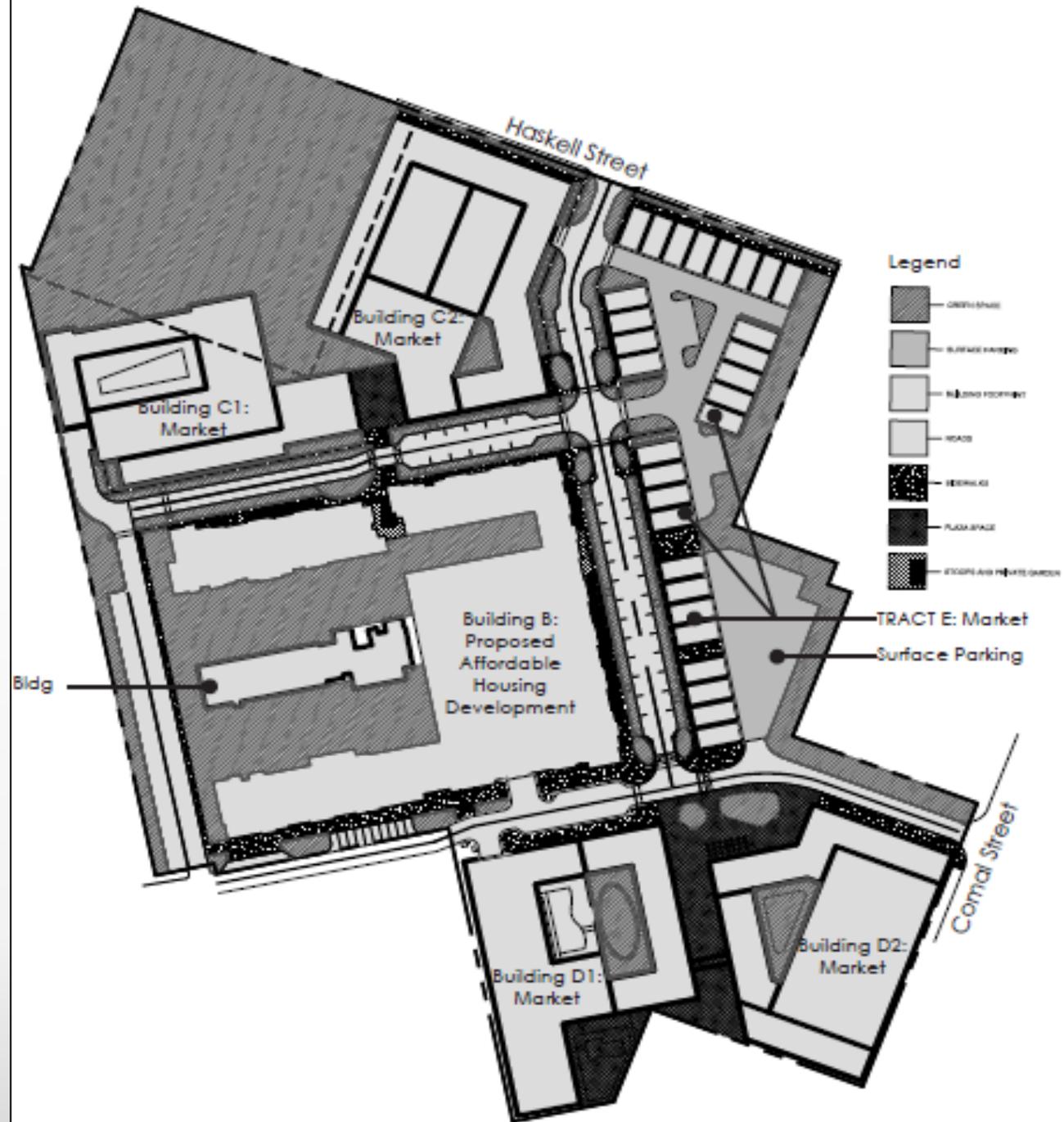
- **City of Austin**
 - 2010 – Council directed City Manager to evaluate the future use of city property and potential for master plan for joint campus in partnership with RBJ (Res. 20100513-033)
 - 2010 – 2015 Economic Development, Planning & Development Review, Parks, Neighborhood Housing, and Building Services evaluate numerous site issues
 - 2015 - Council initiates and approves neighborhood plan amendment from MF to MU (allowing 60' height)
- **Austin Geriatric Center, nonprofit owner of RBJ site**
 - 2010 - Hired HS&A & TBG to develop site plan options with community engagement by residents and neighborhoods
 - 2011 – RBJ Board selects site plan Option C from 5 options presented by HS&A
 - 2013 -- AGC pays off HUD mortgage; selects master development team
 - 2014 -- Executes master development agreement with development team
 - 2015 – Initiates neighborhood plan amendment; Team revises Option C to meet compatibility, heritage tree, affordability goals yet **cannot meet impervious cover cap**

Current Proposal

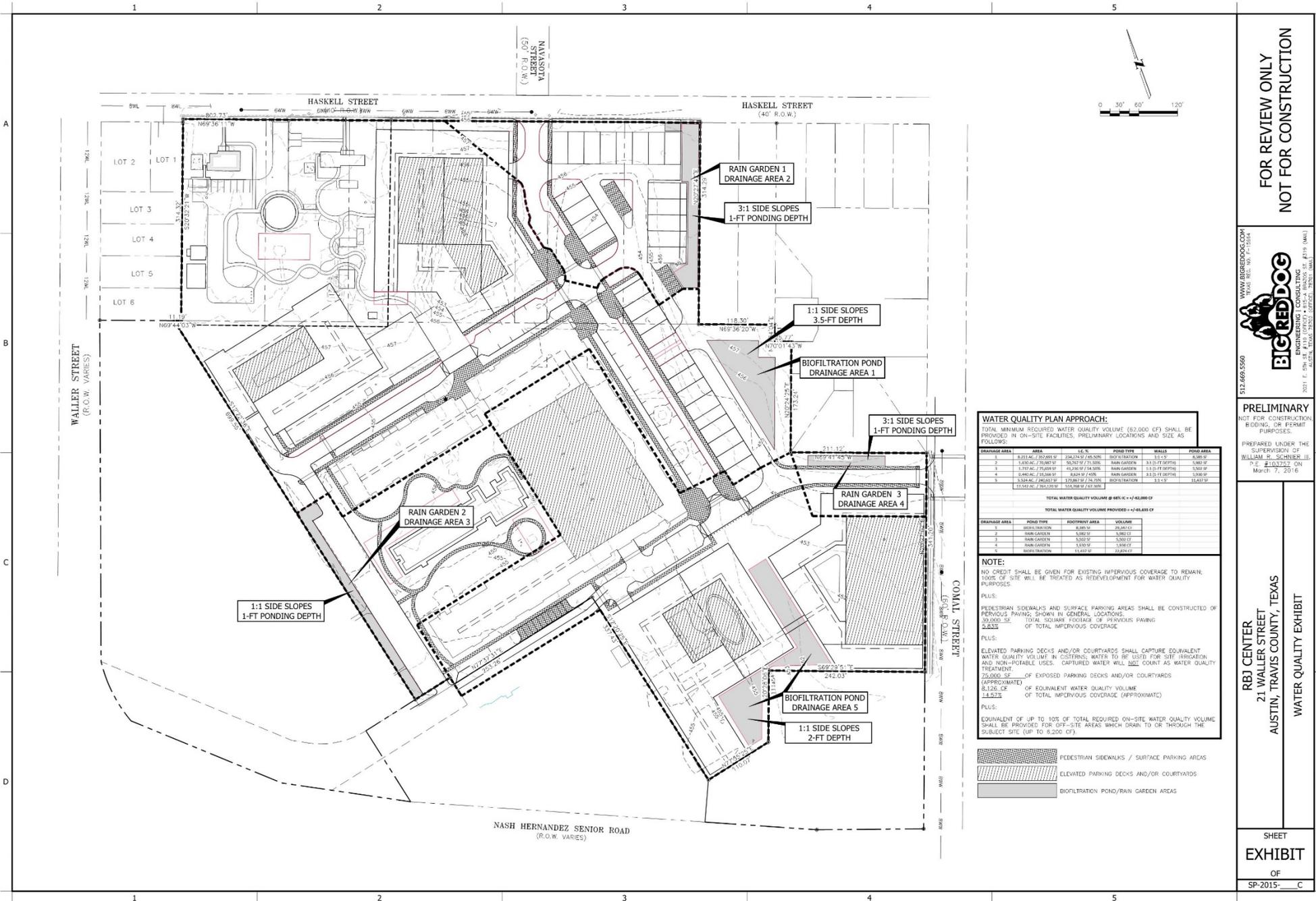
Dec. 2015 - Council initiates amendments to Waterfront Overlay regulations and directs Watershed and Planning and Zoning Department staff to work with developer towards current code impervious cover and water quality to "maximum extent feasible"

- Discussions between staff and developer result in current proposal:
 - 68% impervious cover (40% allowed, approx. 70% increase)
 - Water quality ponds (bio-filtration and rain gardens) sized for 68% impervious cover
 - 30,000 SF of porous pavement for pedestrian areas, but included in WQ pond sizing
 - 8126 CF of rainwater harvesting cisterns to capture 1.3 inches of runoff from 75,000 SF of Impervious surface
 - Treatment of unspecified off-site drainage in the on-site water quality ponds (min. 6200 CF)
 - Porous paving, rainwater harvesting, and off-site treatment result in 35% increase in water quality treatment over code minimum
- Otherwise compliant with current code for tree protection and other environmental regulations

Proposed redevelopment



Proposed redevelopment including water quality controls



WATER QUALITY PLAN APPROACH:
 TOTAL MINIMUM REQUIRED WATER QUALITY VOLUME (82,000 CF) SHALL BE PROVIDED IN ON-SITE FACILITIES, PRELIMINARY LOCATIONS AND SIZE AS FOLLOWS:

DRAINAGE AREA	AREA	I.C. %	POND TYPE	DEPTH	VOLUME
1	8,314 AC / 357,895 SF	234.24% / 445.50%	BIOFILTRATION	3.5 FT	4,385 CF
2	1,516 AC / 67,089 SF	50.70% / 71.20%	RAIN GARDEN	3.5 FT (DEPTH)	5,000 SF
3	1,516 AC / 67,089 SF	45.20% / 64.50%	RAIN GARDEN	3.5 FT (DEPTH)	5,000 SF
4	0.846 AC / 37,068 SF	8.64% / 14.0%	RAIN GARDEN	3.5 FT (DEPTH)	3,000 SF
5	3,306 AC / 144,027 SF	17.88% / 26.20%	BIOFILTRATION	3.5 FT	33,427 SF
	17,149 AC / 754,120 SF	514.08% / 743.30%			

TOTAL WATER QUALITY VOLUME @ 80% I.C. = 47,42,000 CF
 TOTAL WATER QUALITY VOLUME PROVIDED = 47,42,000 CF

DRAINAGE AREA	POND TYPE	FOOTPRINT AREA	VOLUME
1	BIOFILTRATION	8,314 SF	25,447 CF
2	RAIN GARDEN	3,036 SF	3,000 CF
3	RAIN GARDEN	3,036 SF	3,000 CF
4	RAIN GARDEN	1,518 SF	1,500 CF
5	BIOFILTRATION	11,437 SF	33,427 CF

NOTE:
 NO CREDIT SHALL BE GIVEN FOR EXISTING IMPERVIOUS COVERAGE TO REMAIN. 100% OF SITE WILL BE TREATED AS REDEVELOPMENT FOR WATER QUALITY PURPOSES.

PLUS:
 PEDESTRIAN SIDEWALKS AND SURFACE PARKING AREAS SHALL BE CONSTRUCTED OR PERVIOUS PAVING, SHOWN IN GENERAL LOCATIONS.
 30,000 SF OF TOTAL SQUARE FOOTAGE OF PERVIOUS PAVING
 5.83% OF TOTAL IMPERVIOUS COVERAGE

PLUS:
 ELEVATED PARKING DECKS AND/OR COURTYARDS SHALL CAPTURE EQUIVALENT WATER QUALITY VOLUME IN CISTERNS; WATER TO BE USED FOR SITE IRRIGATION AND NON-POTABLE USES. CAPTURED WATER WILL BE COUNT AS WATER QUALITY TREATMENT.
 25,000 SF OF EXPOSED PARKING DECKS AND/OR COURTYARDS (APPROXIMATE) OF EQUIVALENT WATER QUALITY VOLUME
 8,126 CF OF TOTAL IMPERVIOUS COVERAGE (APPROXIMATE)

PLUS:
 EQUIVALENT OF UP TO 10% OF TOTAL REQUIRED ON-SITE WATER QUALITY VOLUME SHALL BE PROVIDED FOR OFF-SITE AREAS WHICH DRAIN TO OR THROUGH THE SUBJECT SITE. (UP TO 8,200 CF)

- PEDESTRIAN SIDEWALKS / SURFACE PARKING AREAS
- ELEVATED PARKING DECKS AND/OR COURTYARDS
- BIOFILTRATION POND/RAIN GARDEN AREAS

FOR REVIEW ONLY
 NOT FOR CONSTRUCTION



PRELIMINARY
 NOT FOR CONSTRUCTION
 BIDDING, OR PERMIT PURPOSES.
 PREPARED UNDER THE SUPERVISION OF
 WILLIAM B. SCHUBERT, II
 P.E. #103727 ON
 MARCH 7, 2016

RBJ CENTER
 21 WALLER STREET
 AUSTIN, TRAVIS COUNTY, TEXAS
 WATER QUALITY EXHIBIT

SHEET
 EXHIBIT
 OF
 SP-2015- C

Current Proposal

Is current proposal the “maximum extent feasible”? Development team asserts that it is.

- Exceeds current impervious cover limit (40%) by approx. 70%
- Increases water quality treatment by 35% by including existing impervious cover and pervious pedestrian areas
- Engineer estimates cost of water quality enhancements to be \$450-560,000 above minimum
- Developer estimates approx. \$4.0M in land sales with 41% impervious cover and \$12.3M in sales based on 68% impervious cover
- Developer has said that the increased impervious cover is necessary to fund critical improvements to RBJ residential tower and construction of affordable senior housing

Basis for financial projections was not provided to City so staff is unable to confirm that it is maximum extent feasible and still have an economically viable project

Questions?